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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,126	04/05/2007	Hajime Nagai	1176/304	4208
46852	7590	09/03/2010	EXAMINER	
LIU & LIU 444 S. FLOWER STREET, SUITE 1750 LOS ANGELES, CA 90071			CHOW, YUK	
			ART UNIT	PAPER NUMBER
			2629	
			NOTIFICATION DATE	DELIVERY MODE
			09/03/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/566,126	Applicant(s) NAGAI ET AL.	
	Examiner YUK CHOW	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/25/2006; 03/26/2009; 08/06/2010</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-9 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (6,501,456).

As to **claim 1**, Saito discloses a voltage supplying device comprising:

a pair of voltage lines, said voltage lines adjacent to each other (see Fig. 2a(11));

and

a controlling means (Fig. 2a(23, 21)) for supplying one of said pair of voltage lines with a voltage (Fig. 14, GS(2n-1)) during a transition from a state in which a supply of a

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voltage to the other of said pair of voltage lines is blocked to a state in which said other of said pair of voltage lines is supplied with a voltage (then GS(2n+1) is supplied with a voltage).

As to **claim 2**, Saito discloses a voltage supplying device as claimed in claim 1, wherein said controlling means blocks the supply of the voltage to said one of said pair of voltage lines after said transition (see Fig. 14, GS(2n) is blocked for 2H).

As to **claim 3**, Saito discloses a voltage supplying device comprising:

- a first relaying line (Fig 14, GS(2n-1));

- a second relaying line (Fig. 14, GS(2n);

- a first voltage line supplied with a voltage (Fig. 14, GS(2n-1) at 2H) through said first relaying line; a

- second voltage line supplied with a voltage (Fig. 14, GS(2n) after 2H) through said second relaying line;

- a third voltage line supplied with a voltage (Fig. 14, GS(2n+1) at 3H) through said first relaying line, said third voltage line adjacent to said second voltage line (GS(2n) and (GS(2n+1) are adjacent to each other); and

- a controlling means for continuing to supply said second voltage line with a voltage (Fig. 7(OUT2)) during a transition from a first voltage supplying state in which said first voltage line is supplied with a voltage to a second voltage supplying state in which said third voltage line is supplied with a voltage (OUT2 is continuously supply between during a transitional period).

As to **claim 4**, Saito discloses the voltage supplying device as claimed in claim 3, wherein said controlling means supplies said first relaying line with a voltage for said third voltage line after supplying said first relaying line with a voltage for said first voltage line (see Fig. 14, voltage supplies to $GS(2n+1)$ is after $GS(2n-1)$), and

wherein said controlling means continues to supply said second relaying line with a voltage for said second voltage line during a transition from a state in which said first relaying line is supplied with said voltage for said first voltage line to a state in which said first relaying line is supplied with said voltage for said third voltage line (Fig. 14, $GS(2n)$ is continuously supplied during the transition period).

As to **claim 5**, Saito discloses the voltage supplying device as claimed in claim 4, wherein said controlling means is adapted to switch from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line (Fig. 14, when $GS(2n-1)$ is switched low, $GS(2n+1)$ is high) , and

wherein said controlling means continues to supply said second voltage line with said voltage for said second voltage line through said second relaying line during a transition from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line (Fig. 14, $GS(2n)$ is continuously supplied during the transition period).

As to **claim 6**, Saito discloses the voltage supplying device as claimed in claim 5, wherein said controlling means is further adapted to switch from a disconnection state in

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which said second voltage line is disconnected from said second relaying line to a connection state in which said second voltage line is connected to said second relaying line (Fig. 14, GS(2n) is switched high at 2H), and

wherein said controlling means continues to keep a connection state in which said second voltage line is connected to said second relaying line during a transition from a disconnection state in which said third voltage line is disconnected from said first relaying line to a connection state in which said third voltage line is connected to said first relaying line (Fig. 14, GS(2n) is continuously supplied during the transition period).

As to **claim 7**, Saito discloses the voltage supplying device as claimed in claim 6, wherein said controlling means comprises:

a first switching means (Fig. 5a(OUT1) for making a connection state in which said first voltage line is connected to said first relaying line and a disconnection state in which said first voltage line is disconnected from said first relaying line;

a second switching means (Fig. 5a(OUT2) for making a connection state in which said second voltage line is connected to said second relaying line and a disconnection state in which said second voltage line is disconnected from said second relaying line; and

a third switching means (Fig. 5a(OUT3) for making a connection state in which said third voltage line is connected to said first relaying line and a disconnection state in which said third voltage line is disconnected from said first relaying line, and

wherein said controlling means comprises a switch controlling means for controlling said first, second, and third switching means in such a way that a connection

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state in which said second voltage line is connected to said second relaying line is kept during a transition from a first state in which said first voltage line is connected to said first relaying line and said third voltage line is disconnected from said first relaying line to a second state in which said first voltage line is disconnected from said first relaying line and said third voltage line is connected to said first relaying line (Col. 8 line 66- Col. 10 line 19).

As to **claim 8**, Saito discloses the voltage supplying device as claimed in claim 7, wherein said first switching means connects said first voltage line to said first relaying line in its on state and disconnects said first voltage line from said first relaying line in its off state (see Fig. 14, GS(2n-1) on/off state), wherein said second switching means connects said second voltage line to said second relaying line in its on state and disconnects said second voltage line from said second relaying line in its off state (see Fig. 14, GS(2n) on/off state), wherein said third switching means connects said third voltage line to said first relaying line in its on state and disconnects said third voltage line from said first relaying line in its off state (see Fig. 14, GS(2n+1) on/off state), and wherein said switch controlling means controls said first, second, and third switching means in such a way that said second switching means keeps on state during a transition of said first switching means from on state to off state and a transition of said third switching means from off state to on state (Fig. 14, GS(2n) is continuously on during the transition period).

As to **claim 9**, Saito discloses the voltage supplying device as claimed in claim 8, wherein said switch controlling means outputs a first control signal for controlling said

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first switching means, a second control signal for controlling said second switching means, and a third control signal for controlling said third switching means (Fig. 4(30) shift register responsible for controlling all three switching means), wherein said first control signal (Fig. 7(OUT1)) has an first on-voltage for turning said first switching means to an on-state and an first off-voltage for turning said first switching means to an off-state, wherein said second control signal (Fig. 7(OUT2)) has an second on-voltage for turning said second switching means to an on-state and an second off-voltage for turning said second switching means to an off-state, wherein said third control signal (Fig. 7(OUT3)) has an third on-voltage for turning said third switching means to an on-state and an third off-voltage for turning said third switching means to an off-state, wherein said switch controlling means outputs said first and third control signals in such a way that a transition of said third control signal from said third off-voltage to said third on-voltage is made when a transition of said first control signal from said first on-voltage to said first off-voltage is made (Fig. 7, OUT3 is on while OUT1 is off), and wherein said switch controlling means outputs said second control signals in such a way that said second control signal has said second on-voltage during a transition of said third control signal from said third off-voltage to said third on-voltage (Fig. 7, OUT2 is on during a transition of OUT3 is on).

As to **claim 12**, Saito discloses the voltage supplying device as claimed in claim 3, wherein said supplying device comprises:

an additional relaying line (Fig. 14, GS(2n+2));

a first voltage line group having said first voltage line (Fig. 14, GS(2n-1)) and said second voltage line (FIG. 14, GS(2n)); and

a second voltage line group having said third voltage line (GS(2n+1)) and a fourth voltage line supplied with a voltage through said additional relaying line (GS(2n+2)).

As to **claim 13**, Saito discloses the voltage supplying device as claimed in claim 12, wherein said supplying device comprises a fifth voltage line supplied (Fig. 14, GS(2n+3)) with a voltage through said first relaying line, said fifth voltage line adjacent to said fourth voltage line (see Fig. 14, (GS(2n+3) and (GS(2n+2) are adjacent to each other), and wherein said controlling means continues to supply said fourth relaying line with a voltage through said additional relaying line during a transition from a state in which said third voltage line is supplied with a voltage through said first relaying line to a state in which said fifth voltage line is supplied with a voltage through said first relaying line (Fig. 14, GS(2n+2) is on while GS(2n+1) and GS(2n) is on).

As to **claim 14**, Saito discloses the voltage supplying device as claimed in claim 3, wherein said controlling means blocks the supply of the voltage to said second voltage line after said transition from said first voltage supplying state to said second voltage supplying state (Fig. 14, GS(2n) is continuously supplied during the transition period).

Regarding **claim 15**, limitations within are the same as in claim 1, therefore same rejection applies.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al.(US 6,501,456).

As to **claim 10 and 11**, Saito discloses the voltage supplying device as claimed in claim 9, wherein said switch controlling means comprises an NAND circuit (fig. 4(30)) for implementing the logic sum of said first control signal and said third control signal to output a signal representing said logic sum of said first and second control signals as said second control signal.

However, Saito's disclosure does not teach implementing the logic sum using an OR gate (as in claim 10) or a delay circuit (as in claim 11). Instead, Saito implements it with a NAND gate, implementing a logic combination using different type components yield to same outcome, which is known in the art. Saito's logic combination could have substituted a NAND gate with an OR gate, and the results would have been predictable and resulted in implementing the logic sum of control signals.

Therefore, the claimed subject matter would have been obvious to person having ordinary skill in the art at the time invention was made.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YUK CHOW whose telephone number is (571)270-1544. The examiner can normally be reached on 8-6 M-TH E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quan-Zhen Wang can be reached on (571) 272-3114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Y. C./
Examiner, Art Unit 2629

/Quan-Zhen Wang/
Supervisory Patent Examiner, Art Unit 2629